AMENDMENTS TO THE CLAIMS

This Listing of Claims will replace all prior versions, and lists, of claims in the Application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A rotor blade system with reduced blade-vortex interaction noise, comprising:

at least one rotor blade coupled at one end thereof to a central hub and extending radially therefrom and terminating in a rotor blade tip face at another end of said at least one rotor blade opposite to said one end thereof, said at least one rotor blade having spaced apart upper and lower surfaces, leading and trailing edge portions at respective opposing joined edges of said upper and lower surfaces, and an interior volume of said at least one rotor blade defined and enveloped by said upper and lower surfaces, said leading and trailing edges, and said rotor blade tip face; and

at least one tube member embedded into said at least one rotor blade in proximity to said another end thereof, said at least one tube member having an inlet located ~~at~~ above said leading edge, an outlet located at said rotor blade tip face, and a tube member length extending between said inlet and outlet within said interior volume of said at least one rotor blade, wherein said at least one tube

member being positioned within said at least one rotor blade such that a portion of incident flow is directed from said leading edge through said at least one tube member and is ejected from said rotor blade tip face whereby a tip vortex is detached from said rotor blade tip face and turbulent vortlets are introduced within a laminar core of a developing vortex for dissolving said laminar core and reducing blade-vortex interaction noise, said inlet being shaped and positioned to maximize attenuation of flow velocities within the vortex core.

Claim 2 (original): The rotor blade system of Claim 1, including a plurality of tube members extending in a predetermined fashion within said interior volume of said at least one rotor blade, and wherein a plurality of inlets and outlets are formed respectively on said leading edge and said rotor blade tip face of said at least one rotor blade.

Claim 3 (original): The rotor blade system of Claim 2, comprising four said tube members.

Claim 4 (original): The rotor blade system of Claim 1, wherein said length of said at least one tube member is arcuately shaped.

Claim 5 (cancelled)

Claim 6 (original): The rotor blade system of Claim 1, further comprising a plurality of rotor blades.

Claim 7 (original): The rotor blade system of Claim 2, wherein the distance between said outlets is approximately 0.157 of the chord of said rotor blade tip, and wherein the diameter of each said tube member is approximately 0.067 of said chord.

Claim 8 (cancelled)

Claim 9 (currently amended): A method of reducing blade vortex interaction noise in a rotor blade system, comprising the steps of:

coupling at least one rotor blade at one end thereof to a central hub and extending said at least one rotor blade radially therefrom, said at least one rotor blade including:

a rotor blade tip face on another end of said at least one rotor blade opposedly to said one end thereof,

spaced apart upper and lower surfaces,

leading and trailing edge portions at respective opposing joined edges of said upper and lower surfaces, and

an interior volume of said at least one rotor blade defined and enveloped by said upper and lower surfaces, said leading and trailing edges, and said rotor blade tip face; and

embedding at least one tube member into said at least one rotor blade in proximity to said blade tip face, said at least one tube member having an inlet thereof positioned ~~at~~ above said leading edge portion, an outlet thereof positioned at said rotor blade tip face, and a tube member length extending in arcuated fashion between said inlet and outlet within said interior volume of said at least one rotor blade, wherein said at least one tube member being positioned within said at least one rotor blade such that a portion of incident flow is directed from said leading edge through said at least one tube member and is ejected from said rotor blade tip face whereby a tip vortex is detached from said rotor blade tip face and turbulent vortlets are introduced within a laminar core of a developing vortex for dissolving said laminar core and reducing blade-vortex interaction noise, said inlet being shaped and positioned to maximize attenuation of flow velocities within the vortex core.

Claim 10 (original): The method of Claim 9, further comprising the steps of:

embedding into said at least one rotor blade a plurality of said tube members,

forming an array of a plurality of said inlets at said leading edge position, and

forming an array of a plurality of said outlets at said rotor blade tip.

Claim 11 (cancelled)